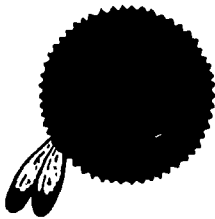


UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS	WELL LOG	ELECTRIC LOGS	FILE	X	WATER SANDS	LOCATION INSPECTED	SUB REPORT/abd
Oper. History and (S) 2H 5-1-91							
DATE FILED	3-28-90			PUBLIC LEASE NO		INDIAN NOG 8702-1116	
LAND FEE & PATENTED	STATE LEASE NO			PUBLIC LEASE NO			
DRILLING APPROVED	4-25-90 (EXCEPTION LOCATION)						
SPUDDED IN							
COMPLETED	PUT TO PRODUCING						
INITIAL PRODUCTION							
GRAVITY API				Confidential			
GOR							
PRODUCING ZONES							
TOTAL DEPTH							
WELL ELEVATION							
DATE ABANDONED	OIA 5-7-91						
FIELD	WILDCAT						
UNIT							
COUNTY	SAN JUAN						
WELL NO	WHITE MESA 27K #1			API NO. 43-037-31526			
LOCATION	2285' FSL	FT FROM (N) (S) LINE	1400' FWL	FT FROM (E) (W) LINE	NESW	1/4 - 1/4 SEC	27
TWP	RGE	SEC	OPERATOR		TWP	RGE	SEC
42S	24E	27	CHUSKA ENERGY COMPANY				



CHUSKA ENERGY COMPANY

315 N BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE (505) 326-5525

RECEIVED
MAR 28 1990

March 26, 1990

DIVISION OF
OIL, GAS & MINING

State of Utah Department of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Building, Suite 350
Salt Lake City, Utah 84180-1203

Ref: Application for Permit to Drill: White Mesa 27F Well No. 1,
San Juan County, Utah

Gentlemen

Attached for your examination and approval is the original and two copies of an Application for Permit to Drill the White Mesa 27F Well No. 1 in San Juan County, Utah. This well will be drilled as part of an ongoing exploration program.

Please advise if you require additional information concerning this application. Chuska will greatly appreciate your prompt consideration.

Sincerely,

Donald G. Barnes
Operations Manager

DSB/csw
File: C:\WP\CSWH\WHITMESA.27F\APDCOV

icl.

5 OF UTAH
DIVISION OF OIL, GAS AND MINING

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Well DRILL <input checked="" type="checkbox"/> PLUG BACK <input type="checkbox"/>		3. Lease Designation and Serial No. NOG 8702-1116	
1b. Type of Well Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		6. If Indian, Allottee or Tribe Name Navajo Tribal	
2. Name of Operator Chuska Energy Company		7. Unit Agreement Name	
3. Address of Operator 315 North Behrend, Farmington, New Mexico 87401		8. Firm or Lessee Name White Mesa 27F	
4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface: 2148 FNL, 1,948 FWL		9. Well No. 1	
At proposed prod. zone: Same		10. Field and Pool or Wildcat Wildcat	
14. Distance in miles and direction from nearest town or post office*		11. 00, Sec., T., R., N., or S. and Survey or Area S27 T42S R24E	
13. Distance from proposed location to nearest property or lease line, ft. (Also to nearest strig. line if any)		12. County or Parish San Juan	
15. No. of acres in lease		14. State Utah	
16. No. of acres assigned to this well		19. Proposed depth 7,887	
17. Rotary or cable tools		20. Rotary or cable tools Rotary	
21. Elevations (Show whether DF, RT, GR, etc.) 5,587 GR		22. Approx. date work will start* 7-15-90	
23. PROPOSED CASING AND CEMENTING PROGRAM			
Size of Hole	Size of Casing	Weight per Foot	Setting Depth
12 1/4"	8 5/8"	24 lb	500
7 7/8"	5 1/2"	15.5 lb	7,887
Quantity of Cement 371 sk 6 + 6% CaCl ₂ 863 sk 9, 65:35 Poz + 6% Gel			

Refer to attached 10-point Drilling Plan etc.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

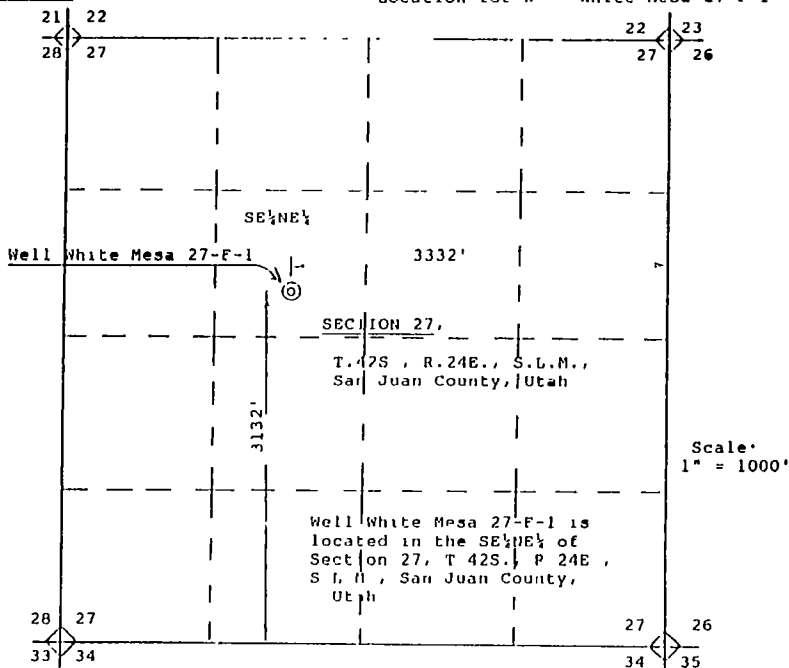
24. I hereby certify that this report is true and complete to the best of my knowledge.

Signed: Ronald S. Barnes Title: Operations Manager Date: 3-26-90
 (This space for Federal or State office use)

API NO. _____ Approval Date: _____

Approved by: _____ Title: _____ Date: _____
 Conditions of approval, if any: _____

*See Instructions On Reverse Side

Archeological
Site
Markers

N

Scale: 1" = 100'

Ref elev 5588.05

N 42°45'04"W.-
203.1'

Reserve

Elev 5587.6

White Mesa 27-F-1
Elev 5587.2S.42°45'04"E.
207.5'Ref. elev.
5588.6

Elev 5578.6

Line 15

Existing
Seismograph
Road

KNOW ALL MEN BY THESE PRESENTS
THAT I, FREDRIC P. THOMAS
do hereby certify that I prepared this plat from an
actual and accurate survey of the land and that the
same is true and correct to the best of my knowledge
and belief.

Fredric P. Thomas
FREDRIC P. THOMAS
Reg. L.S. and P.E. Surveyor
Cada. Reg. No. 8728
Utah Reg. No. 4346

[THOMAS] Engineering Inc

815 N. Linden
Cortez, Colorado
365 4496



CHUSKA ENERGY COMPANY

10 POINT DRILLING PLAN

White Mesa 27F Well No. 1
Section 27, Township 42S, Range 24E
2148 FNL, 1948 FWL
San Juan County, Utah

1. SURFACE FORMATION

Geological name of surface formation: Dakota/Burro Canyon

2. ELEVATION

Surface elevation is 5,587 GP.

3. ESTIMATED FORMATION TOPS

<u>Depth</u>	<u>Formation</u>	<u>Sub Sea Elevation</u>
Surface	Dakota/Burro Canyon	+ 5587
597	Morrison	+ 5000
1251	Navajo	+ 4336
3133	DeChelly	+ 2454
3795	Organ Rock	+ 2194
4062	Cedar Mesa	+ 1521
5136	Hermosa	+ 551
5327	Ismay	- 300
6007	Desert Creek	- 500
6347	Akai	- 760 Secondary Target
6597	Barker Creek	- 1010 Primary Target
7077	Dissemination	1510
7907	Total Depth	2500

4. PROPOSED CASING CEMENTING PROGRAM

	<u>Depth</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>
Surface	500	8 5/8"	24.0 ppf	P-55	STC
Production:	7,887	5 1/2"	See detail below		

Detailed production string (5 1/2"):

<u>Interval</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>
0 - 40	20.0 ppf	N-80	LTC
40' - 6,190'	15.5 ppf	K-55	LTC
6,190 - 6,750'	20.0 ppf	N-80	LTC
6,770 - 7,887	17.0 ppf	K-55	LTC

Surface Cementing:

171 sk (427 ft³) Class G cement with 2% CaCl₂ and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Slurry volume will be calculated at 100% excess over annular volume.

Production Cementing:

First Stage

TD to 5,500' (stage collar @ \pm 5,500'). Lead with 167 sk Class G cement, 55.75 Pozmix, with 5% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft³/sk. Tail with 100 sk Class G cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 424 ft³.

Second Stage

5,500' to 7,000' (stage collar at \pm 7,000'). Lead with 172 sk Class G cement, 65.75 Pozmix, with 5% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft³/sk. Tail with 100 sk Class G cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 415 ft³.

Third Stage

7,000' to surface. Lead with 204 sk Class G cement, 65.75 Pozmix, with 5% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft³/sk. Tail with 100 sk Class G cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 430 ft³.

Note: Exact slurry volumes for the production string will be adjusted according to the caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

5. BLOWOUT PREVENTER (See attached schematics)

As abnormal pressure is not anticipated, a 2000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per the attached Exhibits "A" and "B". This will be a 10" x 900 Series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required as part of the rig equipment.

6. PROPOSED MUD PROGRAM

Surface to 3500'

Fresh water, gel, lime and native solids. Weight 8.3-8.7 ppg. Gel/lime sweeps as necessary for hole cleaning.

3500' to 4100'

Low solids, non-dispersed polymer system. Weight 8.6-8.8 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs.

4100' to TD

Saturated salt water, starch, salt gel. Weight 10.0 - 10.5 ppg, viscosity 35 - 40 sec/qt. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs. Mud system to be fully converted and conditioned prior to drilling into the Akataal. to 6750'.

7. AUXILIARY EQUIPMENT

- A. A Kelly cock will be installed during drilling operations, with handle available on the rig floor.
- B. Floor (stabbing) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

8. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from TD to 4000'.

Drill stem testing will be as per the wellsite geologist's recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000' to TD.

9. ABNORMAL PRESSURES/GAS

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H₂S gas is not anticipated, however regular checks will be made while drilling the well.

10. REMARKS

The drilling and completion of this well is estimated to be completed by 11/15/90. Mud date is 11-15-90.

EXHIBIT "A"
BLOWOUT PREVENTER

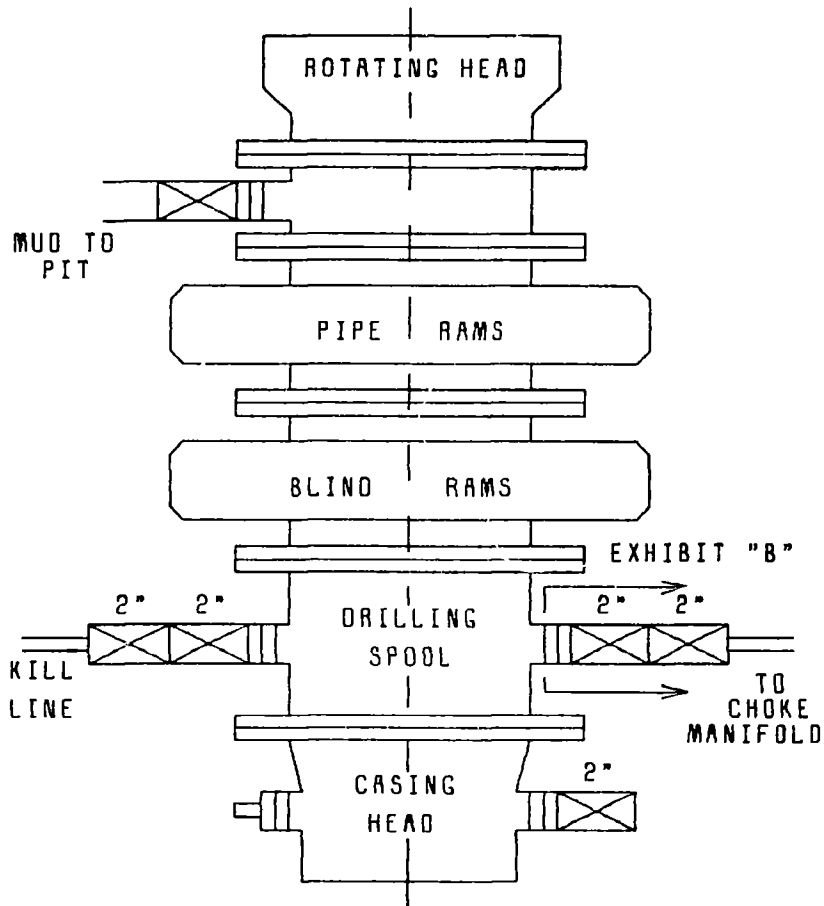
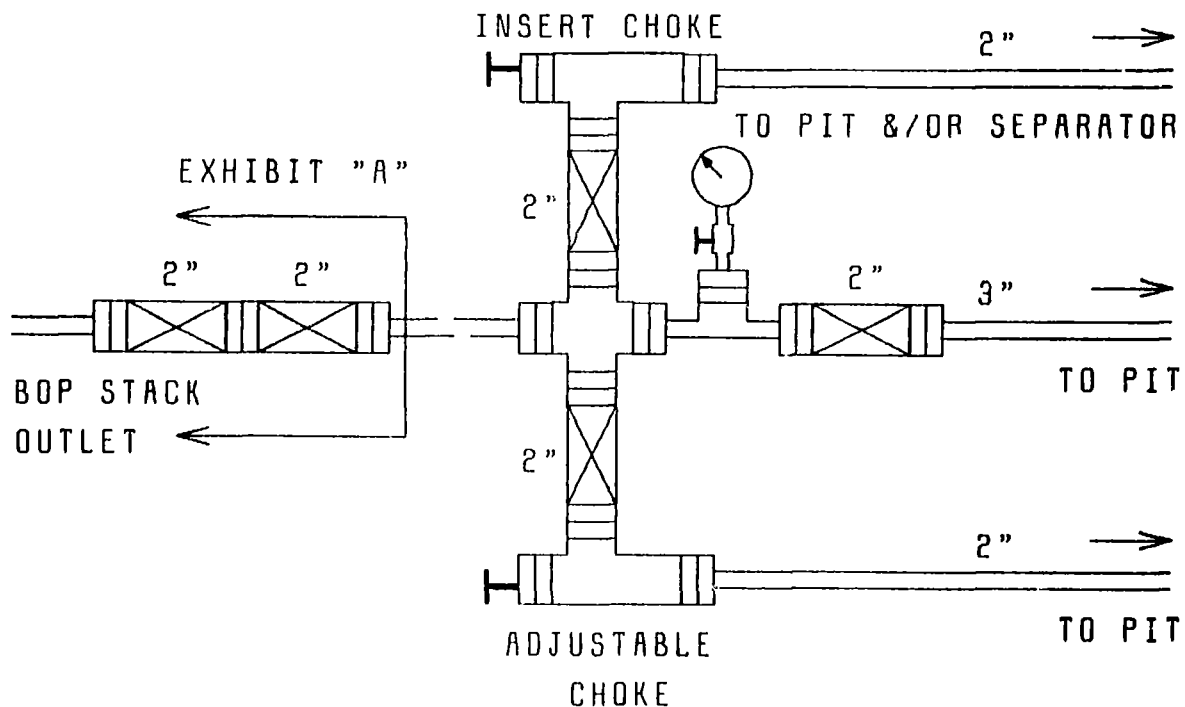


EXHIBIT "B"
CHOKE MANIFOLD



DETAILED DRILLING PROGRAM

DATE: 26 March 1990

WELL NAME: White Mesa 27F WELL NO.: 1

LOCATION: Section 27, Township 42S, Range 24E
2148 FNL, 1948 FWL
San Juan County, Utah

ELEVATION: 5,587 GR

TOTAL DEPTH: 7,897

PROJECTED HORIZON: Primary target is Barker Creek at 6,597'.
Secondary target is Akah at 6,347'.

DRILLING, CASING AND CEMENTING PROGRAM

1. Make a landing up rotary hole to 15' BLM at time of spud and intent to run surface casing.
2. Drill mouse hole and rat hole mix mud prior to spudding well.
3. Drill 12 1/4" hole to \pm 500'. Use fresh water gel/lime spud mud for drilling surface hole. Well bore inclination is not to exceed 1 to 50'. Deviation surveys will be run at least at 250' and at casing point.
4. Run 8 1/8", 24 to 25 ft. x 15, 30 casing to TD. Cement with 171 lbs. (407 ft³) of Class G Cement with 2% CaCl₂ and 1/4 lb/sk. Cel. eff. (sufficient slurry volume to circulate cement to surface).
5. Make a landing of 1" BOP prior to pulling up BOP. Install all related equipment. See BOP schematics for details.
6. Surface casing has been down a minimum of 8 hours prior to commencing pressure testing procedures. Pressure test BOP to 2,000 psi for 30 minutes. Pressure test manifold and all related equipment to 2,000 psi. Pressure test casing to 1,500 psi for 30 min.
7. Drill out surface casing with 7 7/8" bit. Drill 7 7/8" hole to \pm 6,100'. Deviation surveys are to be taken every 500' or on a bit trip, whichever occurs first. Maximum allowable deviation will be 5 at TD, with the maximum allowable rate of change to be 1/100'.

8. Break over fresh water mud to saturated salt water, starch, salt gel system. Ensure conversion is complete and mud is conditioned prior to drilling into the Akah at $\pm 6,350'$. Drill and survey to TD.
9. Run open hole logs and evaluate. Drill stem testing will be as per the wellsite geologist's recommendation.
10. If the well is determined to be productive, run 5 1/2" casing, as detailed in 10-Point Drilling Plan, to TD. Set first stage cementing collar at $\pm 5,500'$ and second stage cementing collar at $\pm 3,000'$. Cement in three stages as per cementing program in 10-point Drilling Plan.
11. Nipple down BOPE. Set 5 1/2" casing slips and cut off casing. Install well head. Release drilling rig and move rig off location.
12. If well is non-productive it will be plugged and abandoned as per State, BLM and Navajo Tribal stipulations.

White Mesa 27F Well No. 1
Section 27, Township 42S, Range 24E
2148 FNL, 1948 FWL
San Juan County, Utah

GENERAL COMPLETION PROCEDURE

If the well is determined to be productive, move in completion rig. Perforate, acidize, and test each productive porosity zone. Completion work will commence after Sundry Notice approval is received. Detailed procedures will follow.

PLUGGING AND ABANDONMENT

If the well is determined not to be productive, the well bore will be plugged as per BLM, State and Navajo Tribal requirements.

White Mesa 27F Well No. 1
Section 27, Township 42S, Range 24E
2148 FNL. 1948 FNL
San Juan County, Utah

SURFACE USE PLAN

1. EXISTING ROADS

Shown on the attached topographic map are the existing roads in the immediate area. Outlined is the route to be followed from Montezuma Creek. Existing roads will be maintained, as necessary, while operations are in progress.

2. PLANNED ACCESS ROAD (SHOWN IN RED)

The access road will be as shown on the attached topographic map. The road will be flat graded, constructed 14' in width and will be maintained as necessary to prevent excessive damage to the surrounding terrain. The road will be upgraded if future oil production is established. Approximately 1/4 mile of new road will be needed to be constructed to the location pad, following an existing seismic line.

3. LOCATION OF EXISTING WELLS & TANK BATTERIES

There are no other producing wells or facilities in the immediate area.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

No production facilities are presently in place. Should the well prove to be productive, facilities (tank battery etc) will be sited on the drilling location pad.

5. LOCATION & TYPE OF WATER SUPPLY

Water will be acquired from a private source. The water will be hauled from a flowing well permitted to Ray Hot Oil Inc., permitted under Water Right 09-1419, A60809.

6. SOURCE OF CONSTRUCTION MATERIALS

The need for additional construction materials is not anticipated. In the event that additional materials are required, they will be acquired either from private sources or with the approval of the Navajo Nation.

7. METHODS OF HANDLING WASTE MATERIAL

Trash will be contained on location in an enclosed bin. It will be hauled to an approved disposal site or burned on location if a burning permit is granted. The reserve pit will be lined, with an approved 7 mil liner, for containing drilling fluids. The pit will also be fenced. All drilling fluids, cuttings and chemical waste will be stored in the reserve pit. Liquid hydrocarbons will be stored in temporary storage tanks and hauled from location to approved sales facilities. The reserve pit will be emptied, back filled and restored to natural terrain status upon completion of drilling operations.

8. ANCILLARY FACILITIES

Chemical portable toilet facilities will be provided on location during drilling and completion operations. No camps or activities are planned for this well.

9. WELL SITE LAYOUT

Attached is a curve of a staking plat, cut and fill requirements and a schematic of the proposed rig layout.

10. PLANS FOR RESTORATION OF THE SURFACE

The location is laid out on a broadly north west south east trend and will require up to 16' of cut in the reserve pit (up to 5' on the south east corner of the location pad) and up to 4' of fill on the southern side of the location pad. Top soil removed from the pad will be stored at the well site. A reserve pit will be built on terrain containing sparse native vegetation. After drilling operations are complete, drilling fluid in the reserve pit will be allowed to separate. All emulsifying fluid in the pit will be disposed of to an approved disposal site. The reserve pit will be covered during the separation and disposal process. The pit will then be covered and the topsoil will be returned to the disturbed area. The terrain will be returned as near to its original condition as possible. Following operations, rehabilitation seeding will be in accordance with APD/BLM/SIA stipulations. There are no residents in the immediate area of the site.

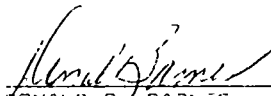
11.

OPERATORS REPRESENTATIVE

CHUSKA ENERGY COMPANY
315 NORTH BEHREND AVENUE
FARMINGTON, NEW MEXICO 87401
DONALD S. BARNES

12. CERTIFICATION

I hereby certify that either I, or persons under my direct supervision have inspected the proposed drill site and access route: that I am familiar with the conditions which presently exist: that the statements made in this plan are, to the best of my knowledge, true and correct and that the work planned will be performed by Chuska Energy, or its sub-contractors, in conformity with the terms and conditions under which it is approved.



DONALD S. BARNES
Operations Manager

CHUSKA ENERGY COMPANY

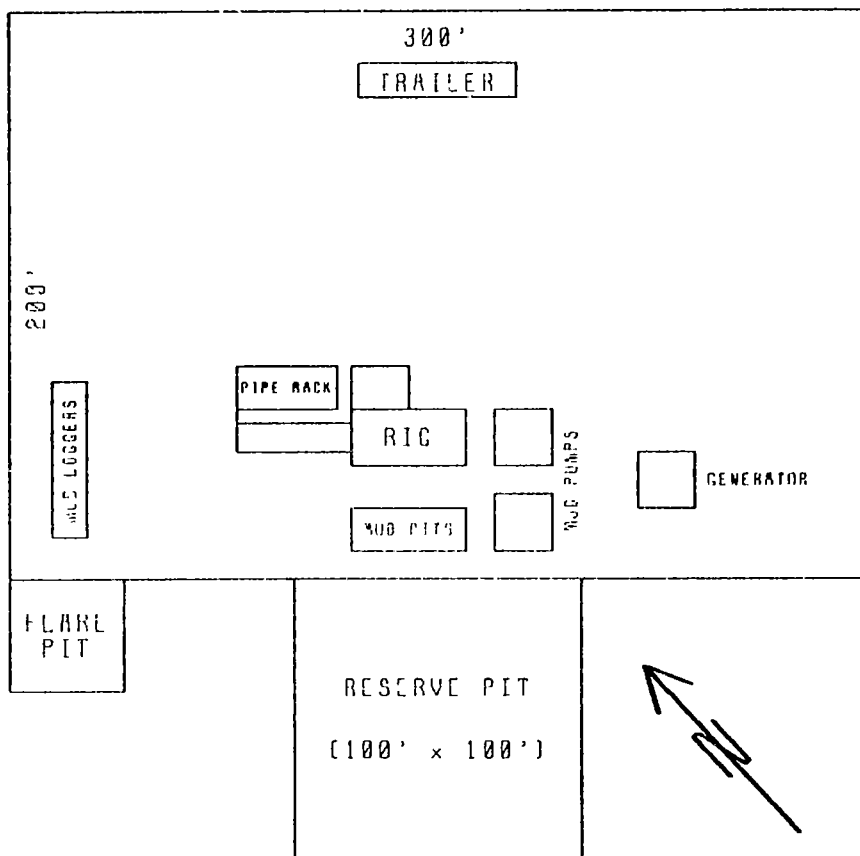
LOCATION LAYOUT

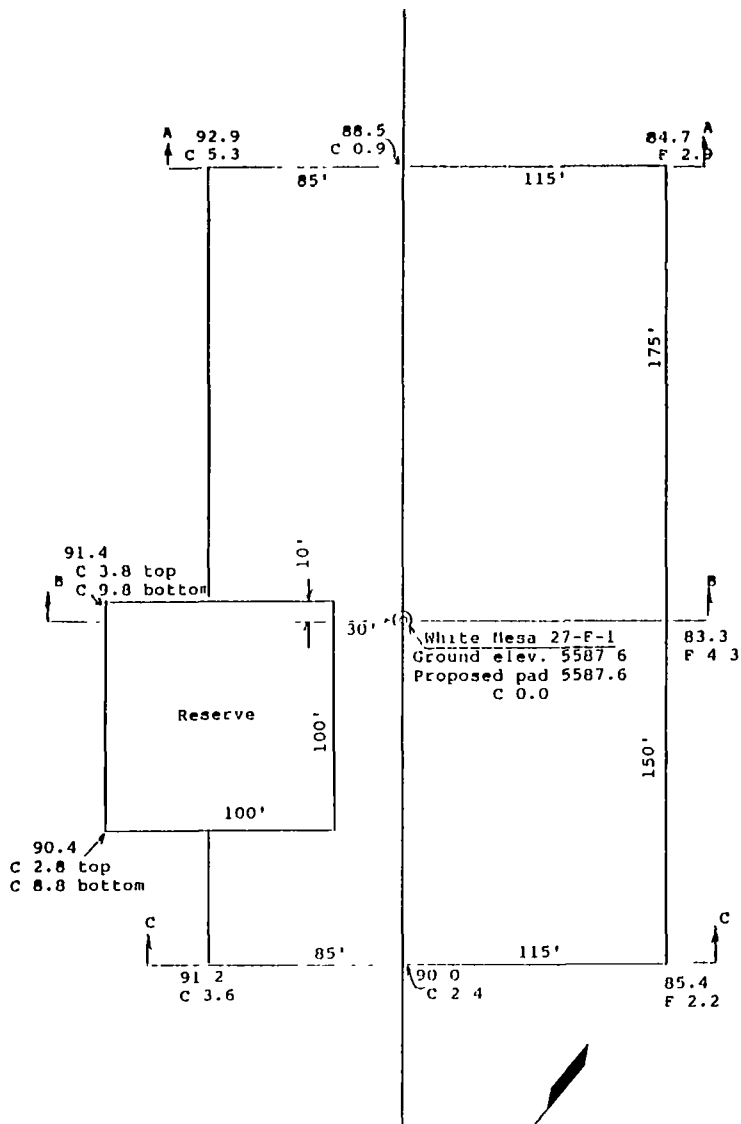
WHITE MESA 27F-1

2148' FNL, 1948' FWL

SECTION 27, TOWNSHIP 42S, RANGE 24E

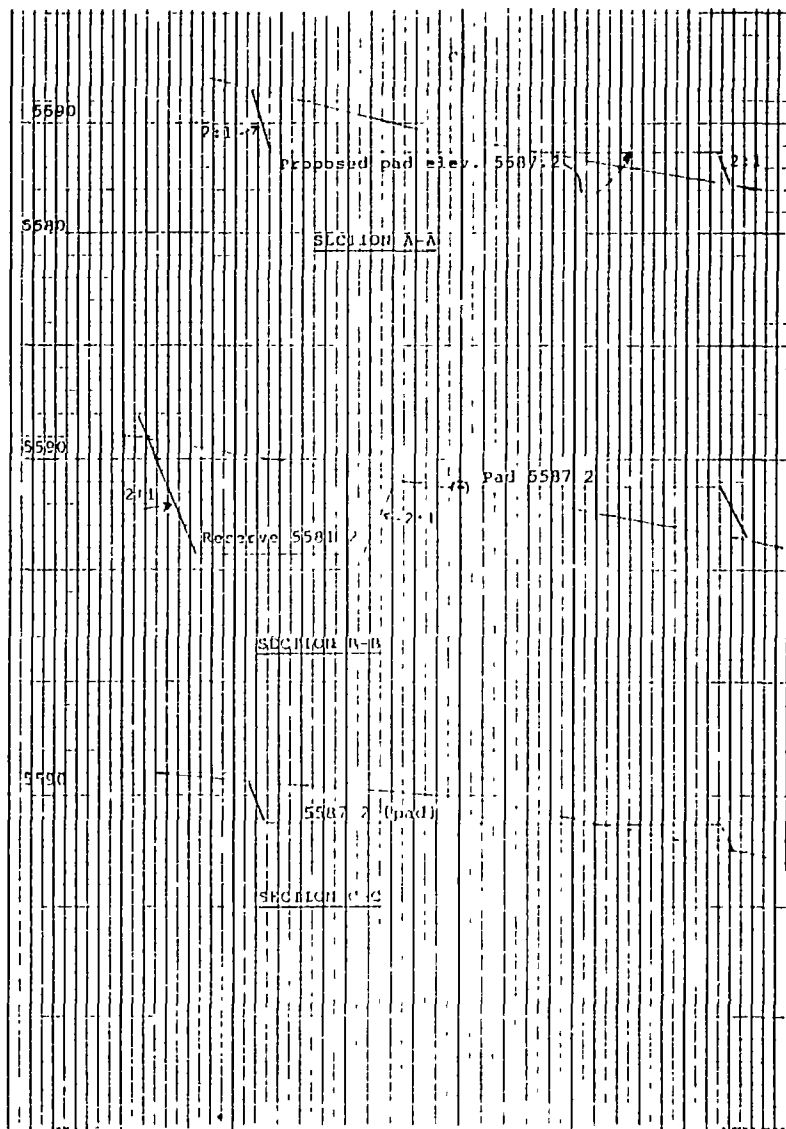
SAN JUAN COUNTY, UTAH





THOMAS Engineering Inc

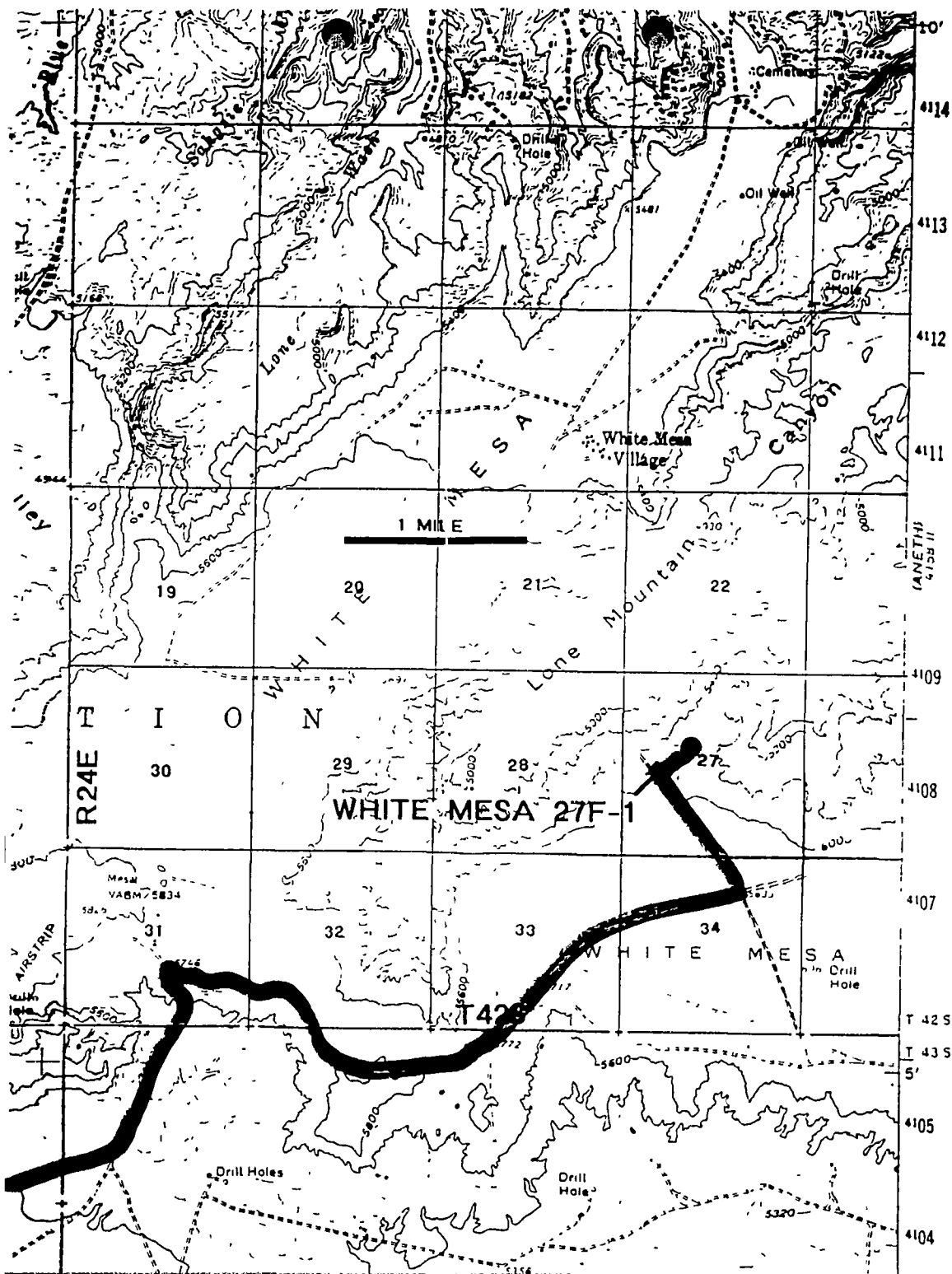
215 N Linden
Cortez, Colorado
365-4498



Horizontal scale: 1" = 50'
Vertical scale: 1" = 10'

(THOMAS) Engineering Inc

215 N. Linden
Fort Collins, Colorado
952-4496





CHUSKA ENERGY COMPANY

315 N BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE (505) 326-5525

RECEIVED
APR 02 1990

March 30, 1990

DIVISION OF
OIL, GAS & MINING

State of Utah Department of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Building, Suite 350
Salt Lake City, Utah 84180-1203

Ref: Sundry Notice: White Mesa 27F-1: Move Location/Change Name

Gentlemen

Attached for your examination and approval is the original and two copies of the subject Sundry Notice which is being submitted as a result of moving the well in order to avoid archaeological sites.

Please advise if you require additional information concerning this application. Chuska will greatly appreciate your prompt consideration.

Sincerely,

Donald S. Barnes
Operations Manager

DSB/cswb

File: C:\WP\CSWH\WHITMESA.27F\MOVESUN.CVR

encl.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

2. LEASE DESIGNATION & SERIAL NO.
NOG 8702-1116

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use APPLICATION FOR PERMIT - for such proposals.)

INDIAN ALLOTTEE OR TRIBE NAME
Navajo Tribal

APR 02 1990

UNIT AREA - FEET X 1/2

1. OIL ☒ GAS ☐ OTHER ☐

2. OPERATOR
Chuska Energy Company

3. ADDRESS OF OPERATOR
315 North Behrend, Farmington, New Mexico 87401

4. FARM OR LEASE NAME

White Mesa 27F 27K

5. LOCATION OF WELL Report location clearly and in accordance with any state requirements.

See also notes 1-7 below.
At surface

2148 FNL, 1948 FWL

At proposed depth, 1948

Same

NESU

6. FIELD AND POOL OR WILDCAT

Wildcat (oil)

11. SEC. 1/4 N 1/4 27K A 10
SURVEY OR AREA

S27 T42S R24E

10. API NO.

43-037-31526

12. ELEVATION (Show whether FSL or FWL)

5,587 GR

TD 7896'

13. COUNTY

San Juan

14. STATE

Utah

15. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO

TEST WATER SHUT-OFF

☐

PULL OR ALTER CASING

☐

FRACURE TREATMENT

☐

MULTIPLE COMPLEMENTS

☐

SHOOTING OR AC CIZ NG

☐

ABANDON

☐

REPAIRS WFL

☐

CHANGE PLANS

☒

(OTHER)

4-1-90

APPROX. DATE WORK WILL START

SUSSEQUENT REPORT OF

WATER SHUT-OFF

☐

REPAIRING WELL

☐

FRACURE TREATMENT

☐

ALTERING CASING

☐

SHOOTING OR AC CIZ NG

☐

ABANDON WFL

☐

(OTHER)

Note: Report results of well completion or recompletion report and log (if any).

DATE OF COMPLETION

16. DESCRIBE PROPOSED OR SO IMPLIED OPERATIONS (Clearly state all operations, including estimated date of start and any proposed work if well is directionally drilled, give surface locations and measured and true vertical depths for all markers and curves pertinent to this work.)

* Must be accompanied by a cement verification report

In order to avoid archaeological sites in the immediate vicinity, it has been necessary to move the well site from its original location. This has resulted in renaming of the well to conform to naming criteria. Details are as follows:

Old Name: White Mesa 27F-1
Old Location: 2148 FNL, 1948 FWL
S27 T42S R24E
Old Elevation: 5,587 GR

NESU TD 7896' (Mississippi)
New Name: White Mesa 27K-1
New Location: 2285' FSL, 1400' FWL
S27 T42S R24E
New Elevation: 5,596 GR

Refer to attachments: revised staking plat APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE 4-25-90

BY John R. Barnes

WELL SPACING: R/L 16-3-3

17. I hereby certify that the foregoing is true and correct.

SIGNED Donald S. Barnes

Operations Manager

3-30-90

DATE

(This space for Federal or State office use)

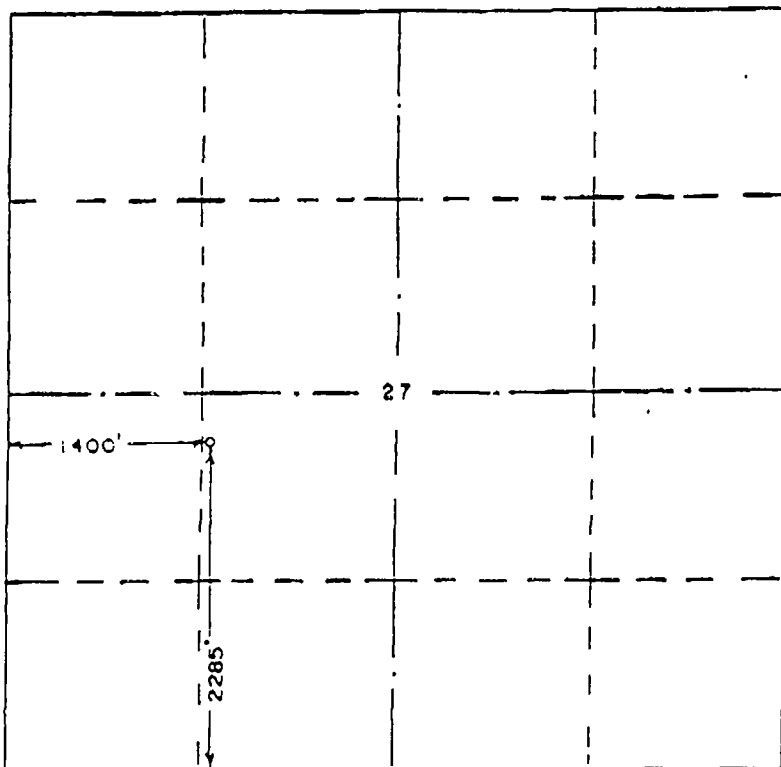
APPROVED BY

CONDITIONS OF APPROVAL IF ANY

DATE

See Instructions On Reverse Side

WELL LOCATION AND ACRUAGE DEDICATION PLAT



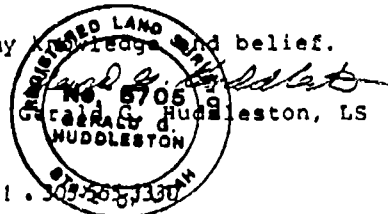
1"=1000'
◆ brass cap

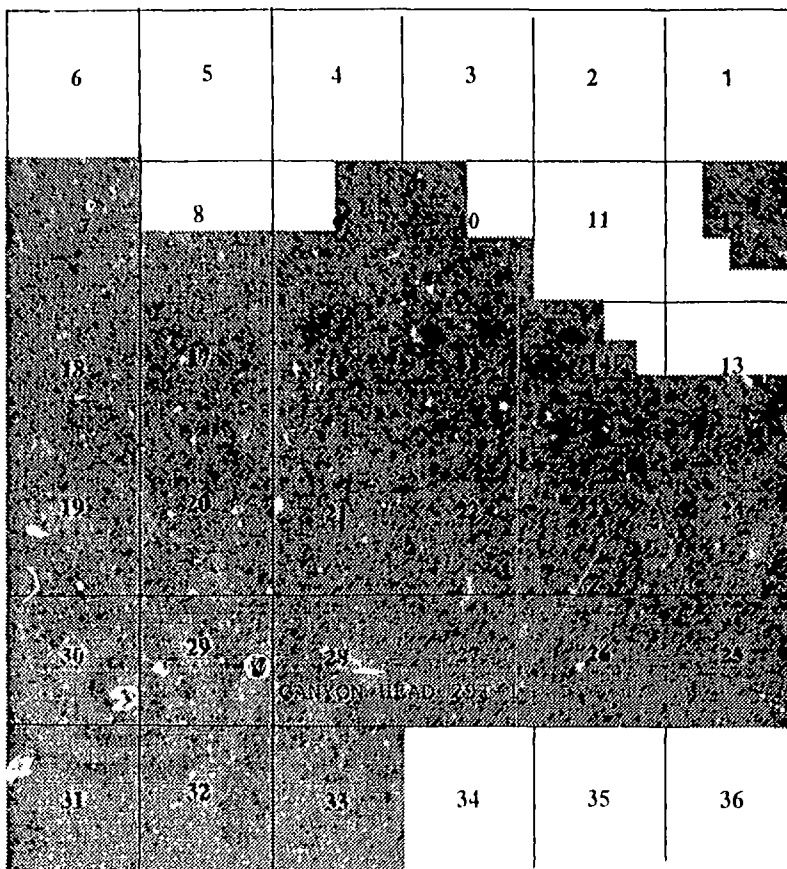
WELL LOCATION DESCRIPTION:

Chuska Energy Company, White Mesa 27 - K - 1
 2285' FSL & 1400' FWL
 Section 27, T.42 S., R.24 E., SLM
 San Juan County, Utah
 5596' ground elevation
 State plane : x = 2,649,678. y = 168,496.
 plus or minus 5', based on existing seismic control

The above plat is true and correct my knowledge and belief.

30 March 1990





CHUSKA ENERGY COMPANY

(CECO)

ACREAGE POSITION UNDER THE 1987

OPERATING AGREEMENT - NOMINATED

CHUSKA (CECO)

T42S-R24E

SAN JUAN

COUNTY, UTAH

CHUSKA ENERGY COMPANY

10 POINT DRILLING PLAN

White Mesa 27K Well No. 1
Section 27, Township 42S, Range 24E
2285 FSL, 1400 FWL
San Juan County, Utah

1. SURFACE FORMATION

Geological name of surface formation: Dakota/Burro Canyon

2. ELEVATION

Surface elevation is 5,596 GR.

3. ESTIMATED FORMATION TOPS

<u>Depth</u>	<u>Formation</u>	<u>Sup. Sea</u> <u>Elevation</u>
Surface	Dakota/Burro Canyon	+ 5596
596	Morrison	+ 5000
1260	Navajo	+ 4336
3142	DeChelly	+ 2454
3402	Organ Rock	+ 2194
4072	Cedar Mesa	+ 1924
5045	Hermosa	+ 551
5896	Ismay	- 300
6096	Desert Creek	- 500
6756	Arak	- 760 Secondary Target
6896	Barker Creek	- 1010 Primary Target
7100	Mississippian	- 1510
7700	Total Depth	- 2700

4. PROPOSED CASING/CEMENTING PROGRAM

	<u>Depth</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>
Surface	500	8 5/8"	24.0 ppf	K-55	STC
Production:	7,896	5 1/2"	See detail below		

Detailed production string (5 1/2"):

<u>Interval</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>
0 - 40	20.0 ppf	N-80	LTC
40 - 6,190	15.5 ppf	K-55	LTC
6,190 - 6,750	20.0 ppf	N-80	LTC
6,770 - 7,896	17.0 ppf	K-55	LTC

Surface Cementing:

371 sk (427 ft³) Class 'G' cement with 2% CaCl₂ and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Slurry volume will be calculated at 100% excess over annular volume.

Production Cementing:

First Stage

TD to 5,500 (stage collar @ \pm 5,500). Lead with 168 sk Class G cement, 65.35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft³/sk. Tail with 100 sk Class G cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 420 ft³.

Second Stage

5,500 to 3,000 (stage collar at \pm 3,000). Lead with 172 sk Class G cement, 65.35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft³/sk. Tail with 100 sk Class G cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 437 ft³.

Third Stage

3,000 to surface. Lead with 221 sk Class G cement, 65.35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft³/sk. Tail with 100 sk Class G cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 530 ft³.

Note: Exact slurry volumes for the production string will be adjusted according to the caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

5. BLOWOUT PREVENTER (See attached schematics)

As abnormal pressure is not anticipated, a 2000 psi BOP² system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per the attached Exhibits "A" and "B". This will be a 10" x 900 Series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required as part of the rig equipment.

6. PROPOSED MUD PROGRAM

Surface to 3500

Fresh water, gel, lime and native solids. Weight 8.3 - 8.7 ppg. Gel/lime sweeps as necessary for hole cleaning.

3500 to 5100

Low solids, non-dispersed polymer system. Weight 8.6 - 9.8 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs.

5100 to TD

Saturated salt water, starch, salt gel. Weight 10.0 - 10.5 ppg, viscosity 15 - 40 sec/qt. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs. Mud system to be fully converted and conditioned prior to drilling into the Alun at ± 1350.

7. GENERAL REQUIREMENTS

- A. A Kelly cock will be installed during drilling operations, with handle available on the rig floor.
- B. Floor (staging) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

8. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from TD to 4000 .

Drill stem testing will be as per the wellsite geologist's recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000 to TD.

9. ABNORMAL PRESSURES/GAS

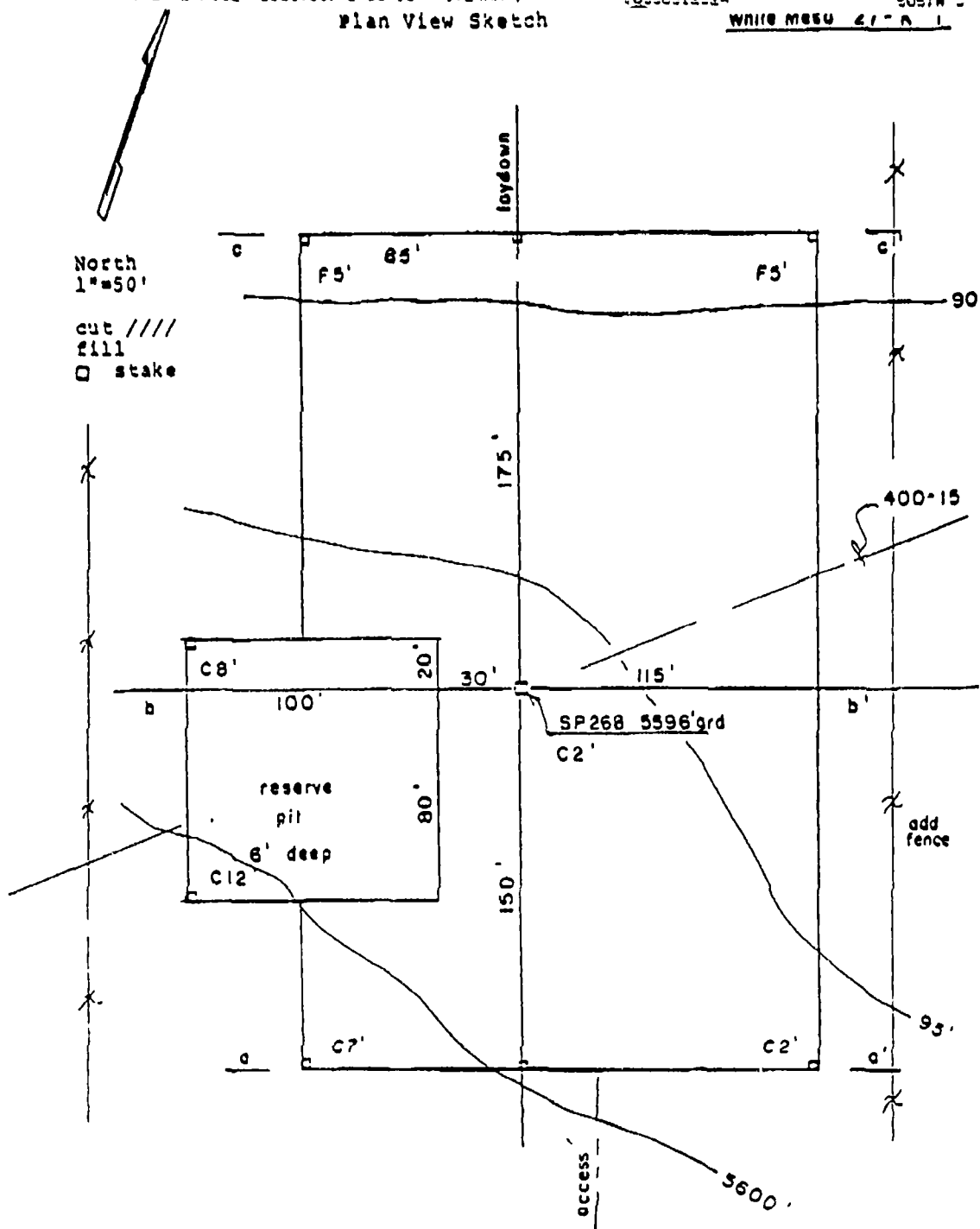
Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H₂S gas is not anticipated, however regular checks will be made while drilling the well.

10. TIME

The drilling and evaluation of this well is estimated to be 28 days. Anticipated spud date is 7/17/90.

Plan View Sketch

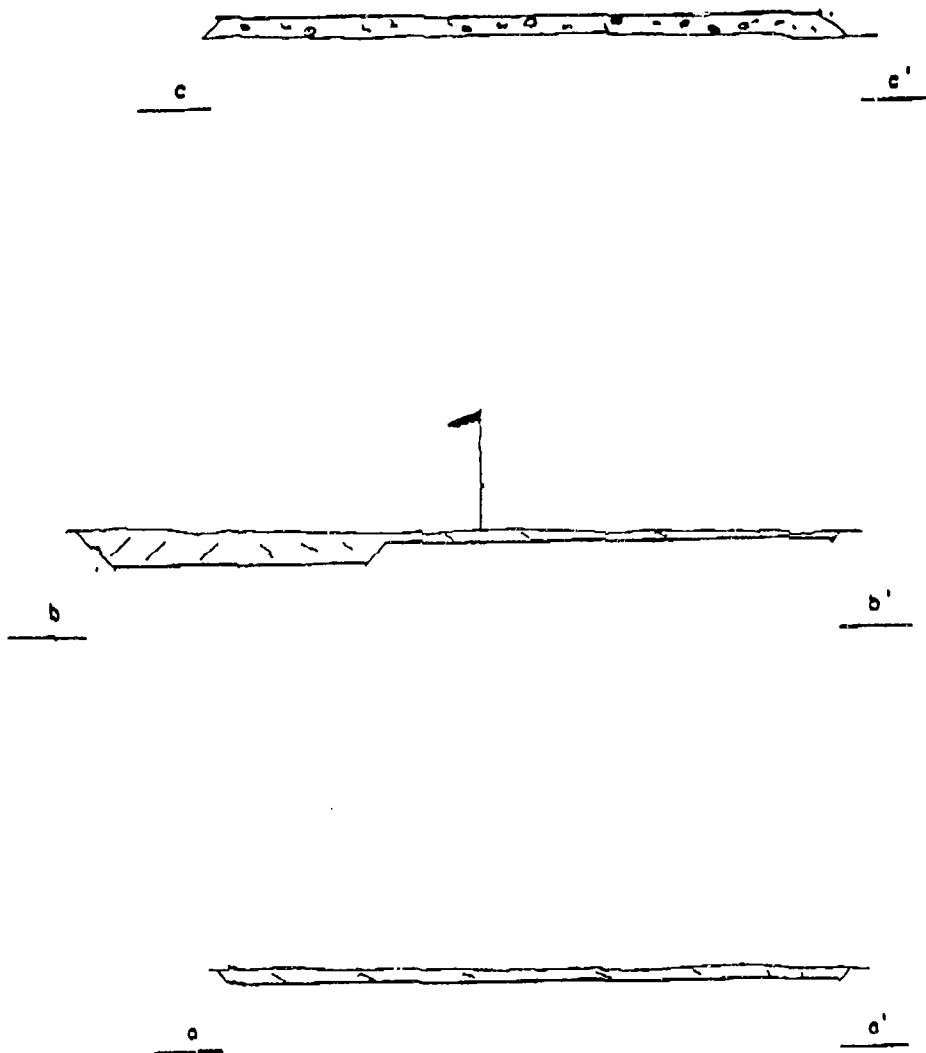
WHITE MESS 21 - A 1



Cross Section

White Mesa 27 - K - 1Cut ////
Fill —•—

1"=50' Horz. & Vert.





STATE OF UTAH
NATURAL RESOURCES
Water Rights

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Robert L. Morgan, State Engineer

Southeastern Area • 453 S. Carbon Avenue • P.O. Box 718 • Price, UT 84501 0718 • 801 637-1303

RECEIVED
MAR 30 1990

March 28, 1990

DIVISION OF
OIL, GAS & MINING

Chuska Energy Company
Attn: Donald S. Barnes, Operations Manager
315 North Behrend
Farmington, New Mexico 87401

Re: 1) Canyon Head 29I Well #1: NE4SE4 Sec. 29, T42S, R24E, SLB&M
2) So. Village 28E Well #1: SW4NW4 Sec. 28, T42S, R24E, SLB&M
3) White Mesa 27F Well #1: SE4NW4 Sec. 27, T42S, R24E, SLB&M

Dear Mr. Barnes:

This letter will serve as authorization from this Division to proceed with the drilling at the above noted location. It is understood that the drilling and maintenance water will be hauled to the site by Hay Hot Oil Inc. under their existing water right 09-1419 (A60809). It is also noted on your request that 1.0 acre feet of water will be required at each well site.

Please contact me if you have any questions.

Sincerely,

Mark P. Page
Area Engineer

cc: Lisha Romero, Division of Oil, Gas & Mining
Jerry Howell, Hay Hot Oil Inc.

HPP/mjk



CHUSKA ENERGY COMPANY

315 N BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-1111

RECEIVED

RECEIVED
MAR 30 1990

MAR 28 1990

WATER RIGHTS
PRICE

March 26, 1990

State of Utah
Water Rights Division
P.O. Box 718
Price, Utah 84501-0718

Attn: Mr Mark Page

Ref: Water Use Permits: Canyon Head 29J Well No. 1 *11E35, 24E 39, T423, R24E*
South Village 28E Well No. 1 *S20N105E 28, T423, R24E*
White Mesa 27F Well No. 1 *S21N105E 27, T423, R24E*

Dear Mr Page

Chuska Energy Company proposes to drill the subject wells commencing in July. We intend to haul water in tank trucks, utilizing Hay Hot Oil Service who will obtain water from their artesian well, details of which are as follows:

1050 FNL, 1575 FWL
S27 T40S R23E
San Juan County, Utah

Permit No: 09-1419 (A60809)

Anticipated water requirement is 1.0 acre-feet per well. Site locations are as detailed in the attached topographic map and staking plats.

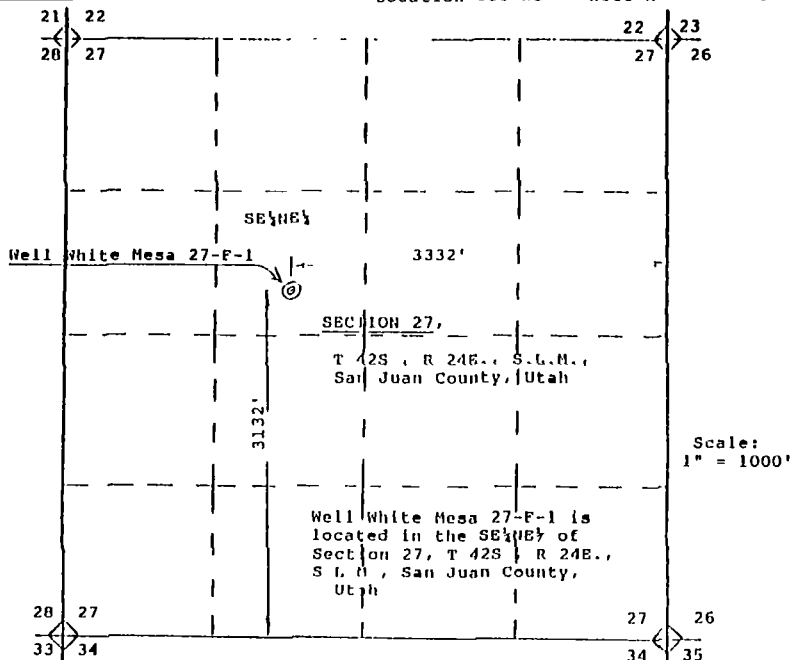
Please advise if you require any further information.

Sincerely yours


Donald S. Barnes
Operations Manager

DSB/csw
File: C:\WP\CSWH\CNYNHEAD.29 \WATER

encl.

Archeological
Site
Markers

Ref elev 5588.05

N. 42°45'04"W -
203.1'

N

Scale. 1" = 100'

275.0
El 5587.6

Reserve

White Mesa 27-F-1
Elev. 5587.2S. 42°45'04"E.
207.5'Ref. elev.
5588.6273.0
Elev. 5578.6

Line 15

Existing
Seismograph
Road

KNOW ALL MEN BY THESE PRESENTS:
THAT I, FREDRIC P THOMAS
do hereby certify that I prepared this plat from an
actual and accurate survey of the land and that the
same is true and correct to the best of my knowledge
and belief.

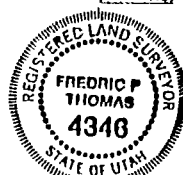
Fredric P Thomas
FREDRIC P THOMAS
Reg. L.S. and P.E.
Cada Reg. No. 6120

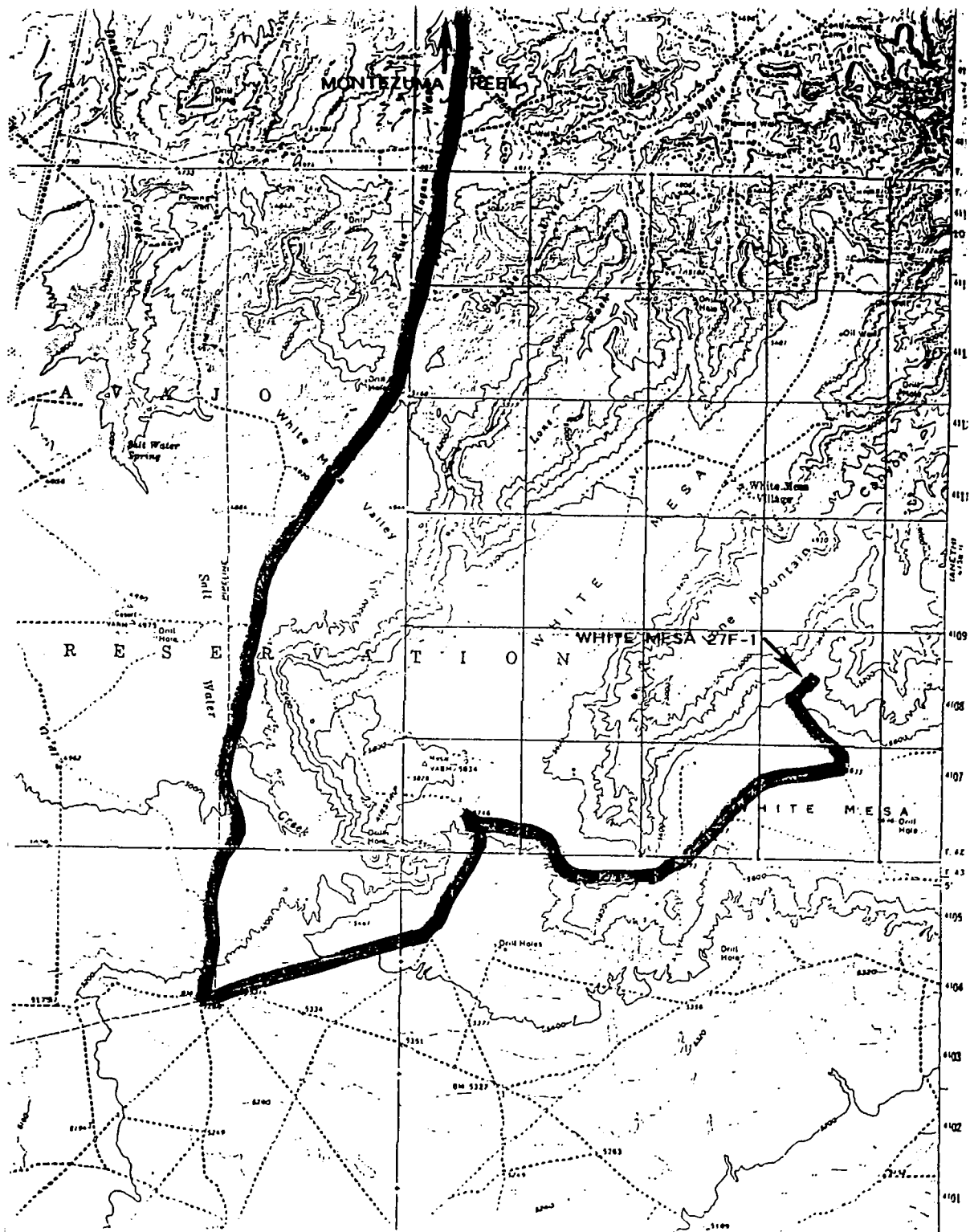
Witness by
Sole
attestation

Utah Reg No. 4346

THOMAS Engineering Inc

214 N Linden
Cortez, Colorado
985-4496





SOUTHEASTERN UTAH ASSOCIATION OF LOCAL GOVERNMENTS

HAROLD JACOBS
Chairman
WILLIAM D. HOWELL
Executive Director

P.O. Drawer A1 • Price, Utah 84501 • Telephone 637-5444

AREAWIDE CLEARINGHOUSE A-95 REVIEW

NOI ___ Preapp ___ App ___ State Plan ___ State Action X Subdivision ___ (ASP # 4-49-5)

Other (indicate) _____ SAI Number UT900410-010

Applicant (Address, Phone Number).

Federal Funds:

Requested _____

Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

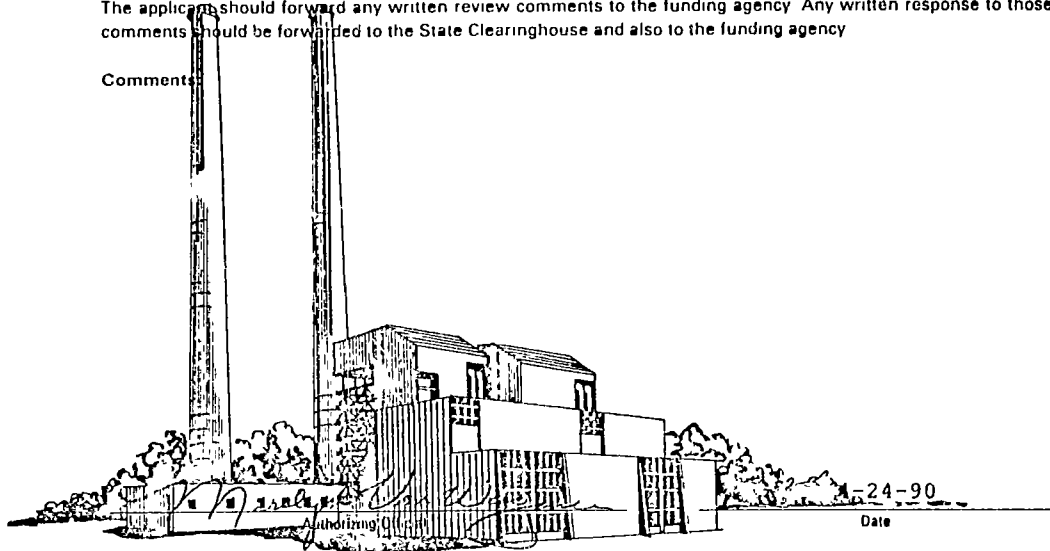
Title.

APPLICATION FOR PERMIT TO DRILL (White Mesa 27K #1)
425 24E ul 27 43-037-31526

- ☒ No comment
☐ See comments below
☐ No action taken because of insufficient information
☐ Please send your formal application to us for review Your attendance is requested ☐

The applicant should forward any written review comments to the funding agency. Any written response to those comments should be forwarded to the State Clearinghouse and also to the funding agency.

Comments:



REGIONAL CLEARINGHOUSE

OPERATOR Chaska Energy Company (N9276) DATE 4-2-90

WELL NAME White Mesa 27K #1

SEC NESW 27 T 42S R 24E COUNTY San Juan

43-037-31526
API NUMBER

Indian (?)
TYPE OF LEASE

CHECK OFF:

☒ PLAT

☒ BOND

☒ NEAREST WELL

☒ LEASE

☒ FIELD

☒ POTASH OR OIL SHALE

PROCESSING COMMENTS:

No other well in sec 27
Water Permit: 7-1419 / A/c 817 (Hay Hot C.I., J no)
RACC 4-5-90 / Process 4-20-90
Non Standard location due to avoid archaeological site

APPROVAL LETTER:

SPACING: ☐ R615-2-3 N/A ☐ R615-3-2
UNIT

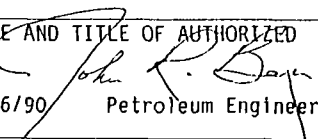
☐ N/A ☒ R615-3-3
CAUSE NO. & DATE

STIPULATIONS:

cc BIA

STATE ACTIONS

Mail to:
RDCC Coordinator
116 State Capitol
Salt Lake City, Utah 84114

-
1. ADMINISTERING STATE AGENCY
OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203
- 2 STATE APPLICATION IDENTIFIER NUMBER:
(assigned by State Clearinghouse)
-
- 3 APPROXIMATE DATE PROJECT WILL START:
7-1-90
-
4. AREAWIDE CLEARING HOUSE(s) RECEIVING STATE ACTIONS:
(to be sent out by agency in block 1)
Southeastern Utah Association of Governments
-
5. TYPE OF ACTION ☐ Lease ☒ Permit ☐ License ☐ Land Aquisition
 ☐ Land Sale ☐ Land Exchange ☐ Other _____
-
6. TITLE OF PROPOSED ACTION
Application for Permit to Drill
-
7. DESCRIPTION:
Chuska Energy Company proposes to drill a wildcat well, the White Mesa 27K #1, on Navajo Tribal lease number NOG 8702-1116 in San Juan, County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The U S Bureau of Land Management or the Bureau of Indian Affairs is the primary administrative agency in this case and must issue approval to drill before operations can commence.
-
- 8 LAND AFFECTED (site location map required) (indicate county)
NE/4 SW/4, Section 27, Township 42 South, Range 24 East, San Juan County, Utah
-
9. HAS THE LOCAL GOVERNMENT(s) BEEN CONTACTED?
Unknown
-
10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:
Degree of impact is based on the discovery of oil or gas in commercial quantities
-
11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE
Glenn Goodwin, Monticello, 587-2561
-
12. FOR FURTHER INFORMATION, CONTACT: 13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL
John Baza
PHONE: 538-5340
- 
DATE: 4/6/90 Petroleum Engineer
-



Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84140-1203
(801) 538-5340

April 25, 1990

Chuska Energy Company
315 North Behrend
Farmington, New Mexico 87401

Gentlemen,

Re. White Mesa 27K #1 - NE SW Sec. 27, T. 42S, R. 24E - San Juan County, Utah
2285' FSL, 1400' FWL

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-3, Oil and Gas Conservation General Rules

In addition, the following actions are necessary to fully comply with this approval

- 1 Spudding notification within 24 hours after drilling operations commence
- 2 Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change
- 3 Submittal of the Report of Water Encountered During Drilling, Form 7.
4. Prompt notification if it is necessary to plug and abandon the well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or Jim Thompson, Lead Inspector, (Home) 298-9318
- 5 Compliance with the requirements of Rule R615-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules
- 6 Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121

7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date

The API number assigned to this well is 43-037-31526.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. J. Earh", with a stylized flourish extending to the right.

R. J. Earh
Associate Director, Oil & Gas

lcr
Enclosures
cc: Bureau of Land Management
Bureau of Indian Affairs
J. L. Thompson
WE14/50-51



CHUSKA ENERGY COMPANY

1775 SHERMAN STREET SUITE 1800 • DENVER, COLORADO 80203 • PHONE (303) 863 7021
FAX # (303) 863 7210

May 17, 1991

Ms. Vicki Kearney
Utah Oil & Gas Commission
355 West North Temple
Three Triad Center
Suite 350
Salt Lake City, Utah
84180-1203

Dear Ms. Kearney:

Please keep all Chuska Energy Company data confidential until further notice.

Thanks,

Herbert P. Mosca
Chuska Staff Geologist

RECEIVED
MAY 20 1991
DIVISION OF
OIL GAS & MINING

ENTITY ACTION FORM - FORM 6

ADDRESS _____

ACTION CODE	CURRENT ENTITY NO	NEW ENTITY NO	APT NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	11563	43-037-31342	<i>Conf</i> LONE MTN 4-12-42S24E-1	NENE	12	42S	24E	SAN JUAN		10-19-93
WELL 1 COMMENTS:											
A	99999	11564	43-037-31569	<i>Conf</i> HAWK 25L-1	NWSW	25	42S	24E	SAN JUAN		10-19-93
WELL 2 COMMENTS:											
A	99999	11565	43-037-31526	<i>Conf</i> WHITE MESA 27K-1	NESW	27	42S	24E	SAN JUAN		10-19-93
WELL 3 COMMENTS:											
A	99999	11566	43-037-31527	<i>Conf</i> SOUTH VILLAGE 28E-1	SWNW	28	42S	24E	SAN JUAN		10-19-93
WELL 4 COMMENTS:											
A	99999	11567	43-037-31528	<i>Conf</i> CANYON HEAD 29I #1	NESE	29	42S	24E	SAN JUAN		10-19-93
WELL 5 COMMENTS:											

ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

lc
L. CORDOVA (DOGM)

Signature

ADMIN. ANALYST

10-19-93

Title

Date

Phone No ()

3
FEBRUARY 8, 1994

TO: WELL FILE

FROM: K. M. HEBERTSON

RE: Status, White Mesa 27K-1 43-037-31526 27-42S-24E

Per telephone conversation with the operator concerning the status of this well, it was determined that the well will not be drilled and the operator has acknowledged that the APD has expired. The operator has been informed that the APD will need to be refiled in order to drill this well at a future date.

As of the above date the APD has been rescinded and the file sent to the LA archives.

KMH

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
OIL AND GAS INSPECTION RECORD

WELL NAME: WHITE MESA 27K #1

LEASE:

API: 4303731526

WELL NO:

QTR/QTR: NESW SECTION: 27

TWP: S420

RANGE: E740

LOCATION: 2285S1400W

FIELD:

OPERATOR: CHUSKA ENERGY COMPANY

CONTRACTOR:

DRILLING / COMPLETION / WORKOVER

Y APD
SAFETY
OPERATIONS

WELL SIGN
POLL. CONTROL
OTHER

HOUSEKEEPING
SURFACE USE

ROPE
PITS

SHUT-IN / 1A:

WELL SIGN
SHUT-IN

HOUSEKEEPING
1A

EQUIPMENT
OTHER

SAFETY

ABANDONED:

MARKER

HOUSEKEEPING

REHAB

OTHER

PRODUCTION:

WELL SIGN
METERING
SECURITY

HOUSEKEEPING
POLL. CONTROL
SAFETY

EQUIPMENT
PITS
OTHER

FACILITIES
DISPOSAL

GAS DISPOSITION:

VENTED/FLARED

SOLD

LEASE USE

LEGEND: Y - YES OR SATISFACTORY
N - NO OR UNSATISFACTORY
A - NOT APPLICABLE

FACILITIES INSPECTED:

REMARKS:

NO GROUND DISTURBED

ACTION:

INSPECTOR: GLENN GOODWIN

DATE: 93/05/05